

Title (en)  
Particulate slagging agent and process for the continuous casting of steel.

Title (de)  
Feinteiliges Verschlackungsmittel und Verfahren zum Stranggießen von Stahl.

Title (fr)  
Agent de scorification en particules fines et procédé de coulée continue de l'acier.

Publication  
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Application  
**EP 80100749 A 19800214**

Priority  
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• US 2692579 A 19790404

Abstract (en)  
1. Finely-divided slagging agent for the continuous casting of steel which tends to release aluminium oxide into the slagging agent during its use in the molten state, characterised in that it has a fluidity of about 10.2 to 40.6 cm (4 to 16 inches), a melting range which, at most, is not substantially above 1,260 degrees C (2,300 degrees F) and a start-up ADK value of not more than 500 seconds, and is further characterised by the following theoretical net oxide analysis values in the ranges mentioned below, the percentages being understood as percentages by weight and being chosen so that the sum is 100% : Constituents of the fluxing agent (\*) % by weight (\*\*) CaO\* (\*) 0-42 (\*\*) MgO\* (\*) 0-20 (\*\*) BaO\* (\*) 0-20 (\*\*) SrO\* (\*) 0-20 (\*\*) MnO\* (\*) 0-20 (\*\*) FeO\* (\*) 0-18 (\*\*) F\* (\*) 4-16 (\*\*) B<sub>2</sub>O<sub>3</sub>\* (\*) 0-15 (\*\*) Na<sub>2</sub>O (\*) 1-25 (\*\*) K<sub>2</sub>O (\*) 0-5 (\*\*) Li<sub>2</sub>O (\*) 0-5 (\*\*) V<sub>2</sub>O<sub>5</sub> (\*) 0-1 (\*\*) NiO (\*) 0-2 (\*\*) CuO (\*) 0-2 (\*\*) ZnO (\*) 0-1 (\*\*) TiO<sub>2</sub> (\*) 0-5 (\*\*) ZrO<sub>2</sub> (\*) 0-3 (\*\*) CoO (\*) 0-2 (\*\*) Cr<sub>2</sub>O<sub>3</sub> (\*) 0-2 (\*\*) MoO<sub>3</sub> (\*) 0-1 (\*\*) Glass network former (\*) SiO<sub>2</sub> (\*) 20-40 (\*\*) Al<sub>2</sub>O<sub>3</sub> (\*) 0-12 (\*\*) P<sub>2</sub>O<sub>5</sub> (\*) 0-10 (\*\*) B<sub>2</sub>O<sub>3</sub> (\*) included above (\*\*) and the ratio of the sum of the theoretical net oxide analysis values of the fluxing-agent constituents marked with an asterisk to the theoretical net oxide analysis value of SiO<sub>2</sub> (this ratio is designated as the R' ratio) is fixed beforehand at 1.5:1 to 3:1 in order to reach an operational ADK value which is not substantially above 750 seconds at most.

Abstract (de)  
Ein feinteiliges Verschlackungsmittel für das Stranggießen von Stahl, der zur Abgabe von Aluminiumoxid in die auf der Oberseite der Stahlschmelze gehaltene geschmolzene Schutzschicht aus dem Verschlackungsmittel neigt, für lange optimale Stranggießperioden ist Gegenstand der Erfindung. Dieses feinteilige Verschlackungsmittel ist durch ein R'-Verhältnis (Verhältnis der Summe der theoretischen Netto-Oxidanalysenwerte von CaO + MgO + BaO + SrO + MnO + FeO + F + B<sub>2</sub>O<sub>3</sub> zum theoretischen Netto-Oxidanalysenwert von SiO<sub>2</sub>) gekennzeichnet, das so vorbestimmt worden ist, daß Betriebs-ADK-Werte von nicht wesentlich über etwa 750 Sekunden nach wesentlicher Aufnahme und Absorption von Aluminiumoxid aus dem Stahl erhalten werden.

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Citation (search report)  
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